



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,464	09/28/2000	Monica G. Varriale	KCX-197 (14737)	8920
7590	01/14/2004		EXAMINER	
Neil C Jones Nelson Mullins Riley & Scarborough Keenan Building Third Floor 1330 Lady Street Columbia, SC 29201			LITHGOW, THOMAS M	
			ART UNIT	PAPER NUMBER
			1724	
DATE MAILED: 01/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	09/675,464	Applicant(s)
Examiner	Thomas M. Lithgow	VARRIALE ET AL.
		Art Unit 1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

### A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 October 2003.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 18-25 and 27-29 are is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 18-25, 28 and 29 is/are rejected.

7) Claim(s) 27 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: *Thomas M. Lithgow*

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 18-23 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Williamson (US 6274041)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Williamson discloses a two step filter process in which a first stage filter removes bacteria via a porous charge modified melt blown nonwoven glass web. The final stage is an activated carbon stage. Applicant appears to have addressed the reference to Pall (US 4523995) in the response of 06-09-2003. The claims are rejected over Williamson (US6274041). To the extent that Williamson discloses a third filter step, it does not negate the teaching of a two step filtration and the language "consisting essentially of" does not overcome the rejection.

1. Claims 18, 20, 23-25 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein (US 3705651). Klein '651 discloses a three step filter device in which the first step is an outer layer of diatomaceous earth which collects the major portion of bacteria, a second stage 13 made of

glass fibers with diatomaceous earth impregnated therewith which removes some of the bacteria, and a third final layer of activated carbon to absorb organics and micropollution. Since the presence of an additional filter layer does not materially effect the novel and inventive idea of removing the bacteria before subjecting the water free of bacteria to an activated carbon step then the language "consisting essentially of" does not define over Klein '651 either. Since either of the first two stages removes "at least a portion" of the bacteria than either one of claims 27 or 28.

2. Claims 18, 20, 23-25 and 28-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Pall (US 3327859). Pall '859 discloses a two step process for purifying water including a first step of employing a microporous layer of asbestos or glass fibers (col. 4, lines 72) over paper with silver bromide coated thereon (filter element 1) for the clear purpose of removing any bacteria prior to the activated carbon second stage 15. An optional external stage coarse filter 23.

3. Claims 18, 23 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by any one of Galbiati (US 4595500) or Kuh (US 4681677) or Bray (US 4711723) or Bosko (US 5004535). Galbiati '500 discloses a fine mesh filter 25 prior to membrane filter 23 for bacterial removal to keep the

down stream activated carbon free of bacteria , followed by the activated carbon stage 31 for removal of chlorinated byproducts. Kuh '677 discloses a submicron filter which captures all the bacteria, and cysts not captured by prefilter 48, before subjecting the water to an activated carbon stage at 71 (col. 6, line 68). Bray '723 discloses a reverse osmosis filter 14 which removes bacteria and viruses (1, 23-1,30) prior to two activated carbon stages 25 and 29. Bosko '535 discloses an prefilter 20, a reverse osmosis membrane stage21 for removing bacteria and viruses – col. 1, lines 20-30, and a final activated carbon stage 22.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pall (US 3327859) as applied to claim 18 above, and further in view of any one of Pall (US 4523995) or Coton (US 5688588) or WO 98/04335. Pall '859 discloses the two step process of removing

bacteria in a first filter step followed by filtering with activated carbon in a second filtering step. The first step includes employing, *inter alia*, a microfiber glass web for removing bacteria and a further teaching that the "filter assembly can employ any type of microporous filter element whose pore diameter is sufficiently small to remove harmful bacteria and other pathogenic organisms"- col. 3, lines 60-64. The three secondary patents teach the use of charge modified melt blown microfiber glass filters which function to filter water and remove such harmful bacteria from the water. To employ such a known and similar material for the same function as the microfiber glass web in Pall '859 would have been obvious to one of ordinary skill in the art.

6. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Applicant's arguments filed 10-24-2003 have been fully considered but they are not persuasive. Applicant asserts the phrase "consisting essentially of" is "close ended" language and then asserts that any prior art filtering steps having more than two filtering steps changes the fundamental character of the recited two step filtration process. It is well held that the

phrase "consisting essentially of" limits a method claim to those steps which " do not materially affect the basic and novel properties" of the claimed method steps. Thus the presence of other steps are permissible in the prior art references as long as the other steps do not materially affect the basic and novel properties of the invention. In regard to Williams '041 , the three step filter process is an alternative embodiment of the invention. Thus the two step process as shown in figures 1-3 are applied against the claim. In Klein '651 there is a three step filter process. The crux of Klein's invention is identical to applicant's in that one desires to remove harmful bacteria from the water prior to contacting the activated carbon layer to prevent the undesirable accumulation of bacteria in the activated carbon layer. The final two steps of Klein include a filter layer 13 which removes bacteria (col. 2, lines 46-48) followed by the activated carbon at 12. The presence of the first filter step does not materially affect the basic and novel properties of the last two steps when one considers that they achieve the exact same affect that applicant's purport as novel. The remaining prior art is similarly maintained for the same reasons as noted herein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Lithgow whose

telephone number is 571-272-1162. The examiner can normally be reached on Mon. -Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blain Copenheaver can be reached on 571-272-1156.



Thomas M. Lithgow  
Primary Examiner  
Art Unit 1724

TML